



TECHNICAL GUIDE

For Air-Cooled MIG Guns - 350, 450 and 550 amp



SAFETY AND WARRANTY INFORMATION

INSTALLATION

MAINTENANCE GUIDE

TECHNICAL DATA

OPTIONS

EXPLODED VIEW & PARTS LIST

TROUBLESHOOTING

Certified ISO 9001:2000
Please read instructions prior to use.
Save this manual for future reference.

M001 REV E (Full Manual) 07/10

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1 Safety and Warranty

1.1 General Safety Guidelines for Semi-Automatic Welding

Before installation or operation of Tregaskiss Semi-Automatic MIG Guns, please read the safety precautions listed below.

1. Always wear a properly fitted welding helmet with the proper grade of filter plate and suitable welding gloves.
2. All exposed skin should be covered with flame resistant, protective clothing. DO NOT WEAR CLOTHING MADE FROM FLAMMABLE SYNTHETIC FIBERS.
3. Protective screens or barriers should be used to protect others from spatter, flash and glare while welding.
4. Prevent fires by ensuring that hot slag or sparks do not contact combustible solids, liquids or gases.
5. Ensure that operator's head is not too close to the arc and that adequate ventilation is available.
6. Constant repetitive motion may lead to cumulative trauma disorders.
7. Do not touch live electrical parts. The following should be checked to prevent electrical shock.
 1. Equipment is adequate for the job, properly grounded and installed according to code.
 2. Faulty or damaged equipment is repaired or replaced.
 3. Proper operator maintenance is performed to prevent excess spatter accumulation in the nozzle, or the contact tip or other areas of the gun.
 4. Electrical insulating components are in place and not damaged. Repair or replace if necessary.
 5. operator and surroundings are not wet
 6. cables are not wrapped around operator's body
 7. equipment is off when not in use
8. CSA Standard W117.2 CODE FOR SAFETY IN WELDING AND CUTTING obtainable from the Canadian Standards Association, Standards Sales, 178 Rexdale Boulevard, Rexdale, Ontario, Canada M9W 1R3.
9. ANSI Standard Z49.1 CODE FOR SAFETY IN WELDING AND CUTTING obtainable from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

CALIFORNIA PROPOSITION 65 WARNING

This product, when used for welding or cutting, produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer.

This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. *Wash hands after use.*

(California Health & Safety Code Section 25249.5 at seq.)

1.2 Warranty

Product is warranted to be free from defects in material and workmanship for the period specified below after the sale by an authorized Buyer. Should there be a defect please refer to our Return Merchandise Policy.

PRODUCT	WARRANTY PERIOD
TOUGH GUN™ MIG Guns and Components	180 days
TGX™ Chassis and TGX Ready To Weld	90 days
TOUGH GUN Reamer	1 year
TOUGH GARD™ Spatter Cleaner	1 year
TOUGH GUN Robotic Peripherals: Clutch, Sprayer, Wire Cutter, Clutch, Insulating Discs,	1 year

Tregaskiss reserves the right to repair, replace or refund the purchase price of non-conforming product. Product found not defective will be returned to the Buyer after notification by Customer Service.

Tregaskiss makes no other warranty of any kind, expressed or implied, including, but not limited to the warranties of merchantability or fitness for any purpose. Tregaskiss shall not be liable under any circumstances to Buyer, or to any person who shall purchase from Buyer, for damages of any kind. Including, but not limited to any, direct, indirect incidental or consequential damages or loss of production or loss of profits resulting from any cause whatsoever, including, but not limited to, any delay, act, error or omission of Tregaskiss.

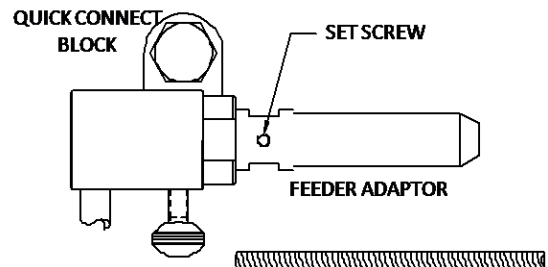
Genuine Tregaskiss parts must be used for safety and performance reasons or the warranty becomes invalid. Warranty shall not apply if accident, abuse, or misuse damages a product, or if a product is modified in any way except by authorized Tregaskiss personnel.

2 Installation

2.1 Installing Quick Connect Block to Feeder

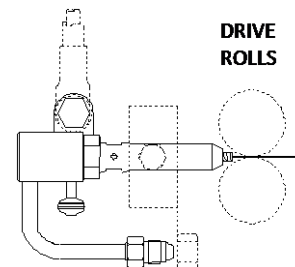
STEP #1

- Insert the correct feeder adaptor liner for desired wire diameter (3 provided) flush with the threaded end of the feeder adaptor.
- Tighten setscrew.
- Thread feeder adaptor into Quick Connect block and tighten.



STEP #2

- Position assembly into feeder adaptor and trim liner within 1/16" (1.6 mm) of the drive rolls and remove burrs if necessary.
- Secure assembly into feeder.
- Thread gas hose nipple into feeder gas fitting.
- Connect power cable to 1/2" (13 mm) power bolt with appropriate lug.
- Tighten all connections.
- Feed welding wire through assembly by hand and tighten drive rolls.



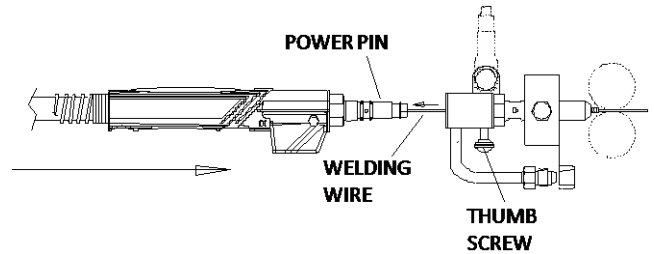
2.2 Installing Semi-Automatic Gun to Quick Connect Block

NOTE: Ensure correct liner and contact tip are utilized. Examine and replace power pin o-rings if necessary.

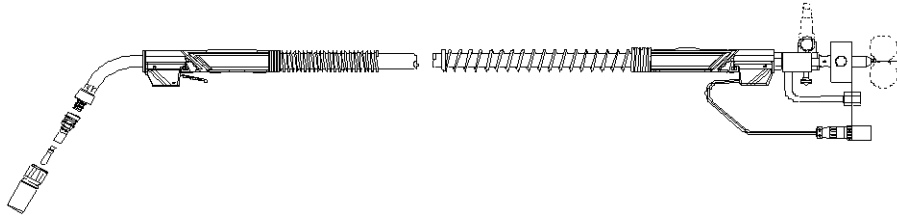
STEP #1

- Guide welding wire into power pin.

- Insert power pin to shoulder of feeder.
- Tighten thumbscrew (on Quick Connect Block) securely.
- Connect control plug lead to control housing on gun.
- Insert control plug into feeder.

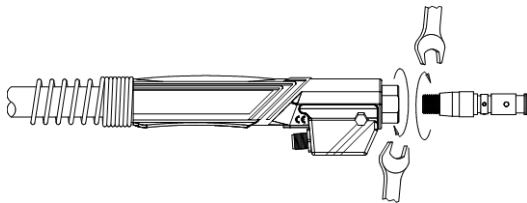


STEP #2



- With gun lying straightened, pull trigger and feed wire through gun. It may be necessary to remove contact tip when feeding small wire sizes).
- Recheck:
 - proper gas flow
 - drive roll pressure
 - voltage and wire feed speed

2.3 Installing Power Pin to Gun



NOTE: TOUGH GUN Semi-Automatic Rear Handle Shown

IMPORTANT: The thread-in two-piece power pin incorporates a taper to seat and lock in the power pin to the rear handle block. Make sure power pin is tightened in the block with a wrench to ensure pin is secure and will not come loose.

NOTE: The rear handle and screws do not have to be removed when installing the two-piece power pins. A unicable repair is needed when changing from 425 Euro assembly to a non-euro power pin.

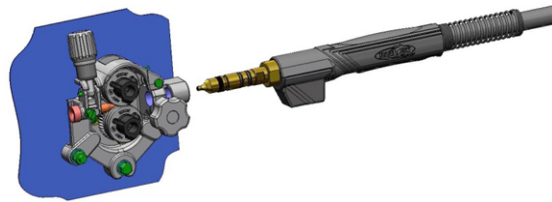
- Thread power pin into the rear handle block.
- Tighten the power pin into the rear block using an adjustable wrench on the rear block and another adjustable wrench on the power pin. Torque to 18 ft-lb (24.4 Nm).
- Install liner.

2.4 Installing Gun with Power Pin to Feeder

For Most Power Pins (Bernard, Euro and Oxo are not direct connect pins) - TOUGH GUN™ Model Shown

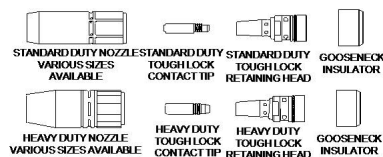
- Insert power pin to shoulder and secure.
- **SEMI-AUTOMATIC GUNS ONLY** - Insert control

- plug to control housing of gun and then to feeder.
- Feed welding wire into power pin by hand and tighten drive rolls.
- **WATER-COOLED GUNS ONLY** - Securely clamp blue hose on rear housing to Water Out on water Cooled and red hose on rear housing to Water In on water cooler.
- On Lincoln feeders it is necessary to connect the gas hose to the barbed fitting on the power pin.



3 Maintenance

3.1 Nozzle and Contact Tip System



IMPORTANT:

- Gooseneck insulator **MUST** be in place before welding to properly insulate gooseneck armor
- Check all parts to ensure that connections are tight before welding
- The retaining head **MUST** be tightened with a 5/8" (16 mm) wrench to prevent the contact tip from over-heating
- **DO NOT** use pliers to remove or tighten the retaining head or scoring may result

Removal and Replacement Nozzle

- Pull slip-on nozzles off with a twisting motion
- When installing the nozzle, ensure that it is fully seated

Contact Tip

- Thread the contact tip into the retaining head
- Torque to 30 in-lbs. (3.5 Nm)
- The Tregaskiss Tip Tool - Part # 450-18 (for heavy-duty tips) or a pair of weld pliers are the optimal tools for contact tip installation

Retaining Head

- Thread retaining head onto gooseneck with a 5/8" (16 mm) wrench
- Torque to 80 in-lbs. (9 Nm)
- **DO NOT** use pliers to remove or tighten the heavy duty retaining head or scoring may result

Gooseneck Insulator

- The gooseneck insulator is pressed onto the gooseneck by hand

3.2 Replacing Conventional Liner

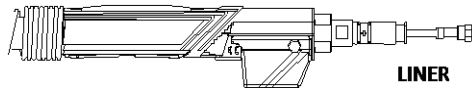
NOTE: For guns equipped with "Direct Plug-Ins", Bernard, or Euro-connector, the procedure is the same. On Miller style guns, the liner is held captive by a guide cap, which must be removed and replaced when changing the liner.

STEP 1

NOTE: Ensure power supply and water (if applicable) is off and gun is removed from feeder before proceeding.

- Remove nozzle, tip and gas diffuser.
- If power pin uses a liner set screw, loosen the set screw using a 5/64" Allen wrench.
- If power pin is thread-in liner type, using a 10 mm wrench, turn thread-in liner retainer counter-clockwise until liner is free from the power pin.
- With gun straightened, grip conduit liner with pliers and remove

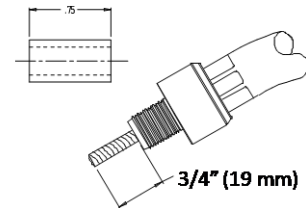
STEP 2



- Feed replacement liner through gun using short strokes to avoid kinking. Twist liner clockwise if necessary.
- Using a 10 mm wrench, turn thread-in liner retainer in a clockwise direction and tighten into the power pin.

STEP 3

- Push liner back into gun and hold in place.
- Using liner gauge, trim conduit liner with 3/4" (19 mm) stick out.
- Remove any burr that may obstruct wire feed, especially on flat wire type conduit liner.
- Replace nozzle, tip and gas diffuser onto gooseneck.

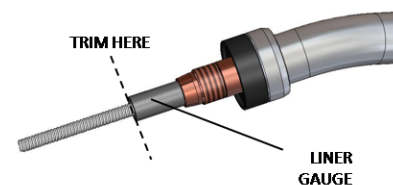


3.3 Installing or Replacing the QUICK LOAD Liner

Initial installation – When replacing conventional liner with QUICK LOAD™ Liner -TOUGH GUN™MIG Gun shown



- Install the QUICK LOAD Liner from the back of the torch with the retainer attached (using the same procedure as installing a conventional liner). Future replacements will be done from the front.
- Push liner back into gun and hold in place. (Using liner gauge, trim conduit liner to a 3/4" stick out.
- Feed wire through liner.
- Reinstall consumables.



Replacement of QUICK LOAD Liner

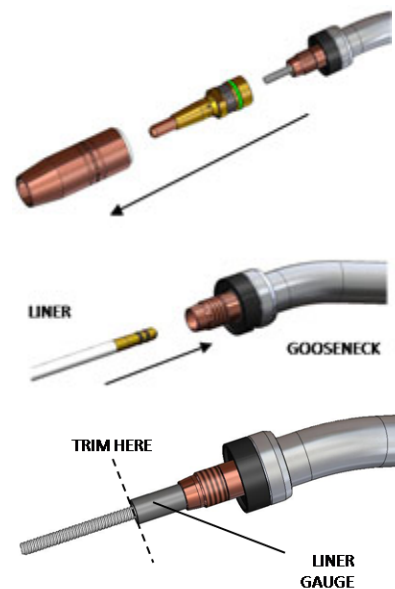
HELPFUL HINT: Before cutting liner make a mark and pull it back out past the end of the welding wire and then cut it and push the liner back into place securely. This will help with feeding the wire through

the contact tip afterwards.

- Remove consumables (nozzle, contact tip and retaining head).
- Remove existing QUICK LOAD Liner from the gun.
- Remove protective cap from the new QUICK LOAD Liner.

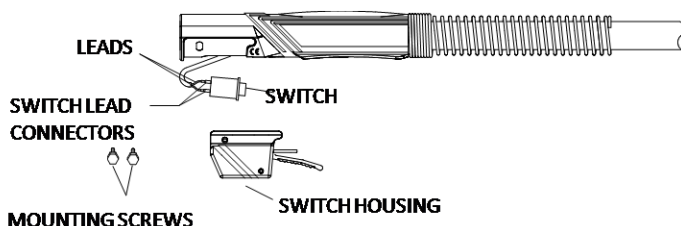
- Insert the new QUICK LOAD Liner through the gooseneck using the welding wire as a guide. (short strokes will prevent from kinking).

- Once liner stops feeding, give it an extra push to ensure it is inserted completely
- Push liner back into gun and hold in place. Using liner gauge, trim conduit liner to a $\frac{3}{4}$ " stick out.
- Reinstall consumables



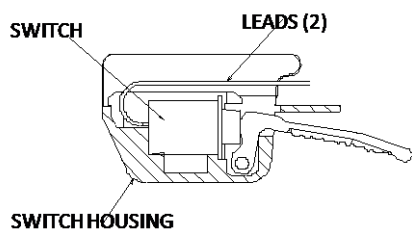
3.4 Replacing the Trigger Switch

STEP 1



- Loosen both mounting screws with a 5/16" (8 mm) nut driver or flathead screwdriver.
- Ease switch out of switch housing.
- Remove switch from switch lead connectors with needle nose pliers.

STEP 2



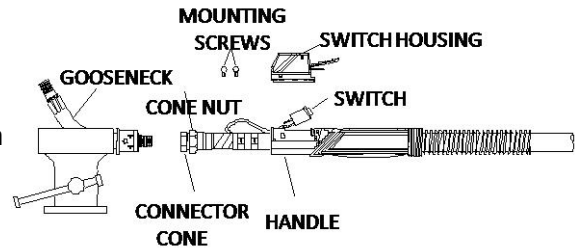
- Push switch lead connectors firmly onto switch terminals with needle nose pliers.
- Depress switch plunger and nest back into housing.
- Fit switch housing into nest on handle (switch leads must lie parallel).
- Align housing holes with threaded holes in body and insert mounting screws.
- Start both screws first before tightening with 5/16" (8 mm) nut driver to even alignment.

IMPORTANT: Use screws specified in the "Exploded View & Parts List" for this gun model to ensure proper length, hardness and tolerance.

3.5 Replacing the Gooseneck

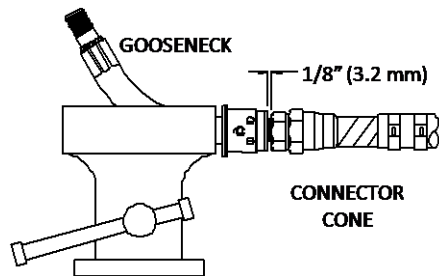
STEP 1 (NOTE: TOUGH GUN Semi-Automatic Gun shown)

- Place gooseneck in vise.
- Remove both switch housing mounting screws.
- Slide handle back exposing the cable connection.
- Loosen the cable / gooseneck connection using an 7/8" wrench.
- Remove from vise and unthread gooseneck by hand.



NOTE: The body is now an integral part of the gooseneck and the handle mounting holes are metric (M5). Use the screws supplied with the new neck to avoid stripping of threads. Old style 407 bodies used Imperial (U.S.) threads.

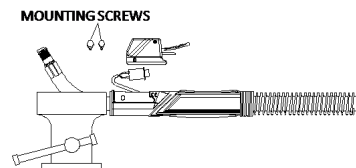
STEP 2



- Thread the gooseneck into the cable connection (hand tighten).
- Place gooseneck in vise and tighten with a wrench to within 1/8" (3.2 mm) spacing between the cable connection and gooseneck body.

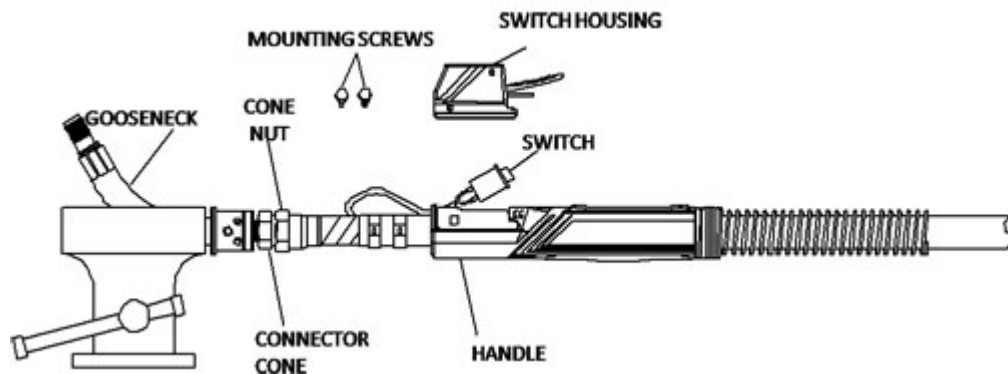
STEP 3

- Install the switch and reposition handle and switch housing.
- Reinstall switch housing mounting screws



3.6 Replacing the Unicable (Air-Cooled)

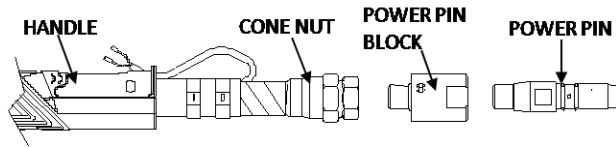
STEP 1



- Remove liner from gun.
- Mount gooseneck in vise.
- Remove both switch housing mounting screws.
- Slide handle back exposing the cable connection.
- Loosen the cable / gooseneck connection using an 7/8" wrench.

- Remove from vise and unthread gooseneck by hand.
- Remove switch from leads and slide handle back.

STEP 2



- Remove power pin from power pin block using a 5/8" wrench on the pin and a 1" wrench on the block
- Remove both terminal housing screws
- Slide handle back exposing the cable connection
- Remove power pin block from unicable using a 7/8" wrench and a 1" wrench

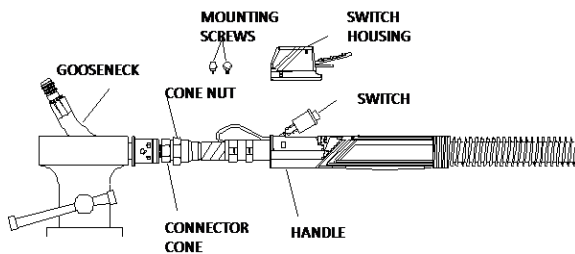
STEP 3

- Take new unicable and starting from the front install the gooseneck
- Slide the handle up over the connection ensuring that the switch leads slide out the hole on the handle
- Install the switch to the switch leads and secure the handle and switch housing in place using the two screws

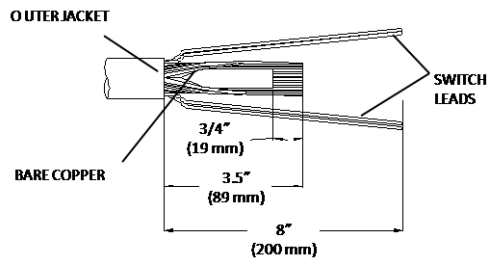
STEP 4

- Reinstall power pin block to rear of unicable and thread power pin into block
- Slide handle up over connection ensuring that switch leads can slide out of the hole
- Plug switch leads into terminal housing and secure handle and housing using two screws
- Reinstall liner (Make sure that there is 3/4" of the liner sticking out past the end of the gooseneck when the torch is fully extended, if there is not a new liner will be required.)
- Reinstall consumables and reconnect to wire feeder

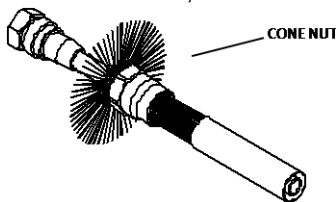
3.7 Repairing the Unicable (Air-Cooled)



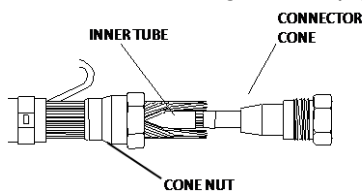
1. Remove consumables (may include Nozzle, Retaining Head or Tip Holder, and Contact Tip).
2. Remove the liner from the gun.
3. Mount gooseneck in the vice.
4. Remove switch housing and switch from leads.
5. Move the handle back.
6. Bend unicable behind connector cone. Cut unicable at bend.
7. Slide two large "oetiker" clamps 1.5 ft down the unicable (required for crimping later).
8. From your cut, (end of cable) measure 8" back and cut away the outer jacket of the cable. **Be careful not to cut the copper wiring and leads**



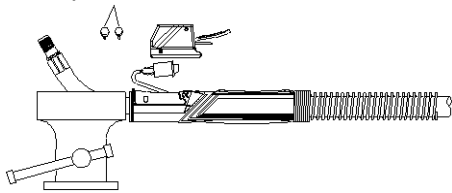
9. Slide outer jacket forward to expose the copper wiring and leads.
10. Pull out the lead wires.
11. From the 8" cut, measure 3 1/2" towards the front of the torch and cut off the excess cable.



12. Fan back copper and remove 3/4" of the inner gas tube.
13. Take the old liner you just removed and cut it to approximately 2 ft long.
14. Thread cone onto vice mounted gooseneck.
15. Insert the 2 ft. of old liner into the gooseneck from the front end of the gooseneck, then slide on the support tube.
16. Slide small Oetiker clamp over top of inner gas tube (Hytrel).
17. Using the 2' old liner as a guide, slide the inner gas tube over the support tube and up to the cone shoulder.
18. Crimp the support tube clamp. Crimp between the black and white switch leads.
19. Position copper wires between roll marked numbers on cone and first step before threads. Crimp the large oetiker clamps 1/4" and 1" behind the outer jacket at the front of the torch.
20. Remove the inner gas tube (Hytrel) from the cone.



21. Fan out the copper and bring the copper around the inner gas tube (Hytrel) evenly.
22. Slide the inner gas tube on the Cone up to the cone shoulder.
23. Fan the copper evenly around the inner gas tube up to the shoulder of the Cone Connector.
24. Thread the Cone Nut onto Connector Cone. Torque the Cone Nut to 30 ft-lbs (There should be about a 1/8" gap between the cone and cone nut).
25. Using 3/4" Teflon electrical tape, wrap up the copper and spare switch leads neatly. Loop the 2 switch leads that will be used. This is to ensure that there is enough slack in the wire for gun articulation. Make sure that the control wire sheath is over switch leads where the cone and cone nut are to prevent any wear.
26. Pull up the handle and feed switch leads through handle.



27. Strip leads about 1/8" back and crimp switch terminals to open leads.
28. Connect the leads to the switch and lay the switch back into the housing.
29. Screw the switch housing back onto the handle.

Required Parts

Unicable Clamp Kit

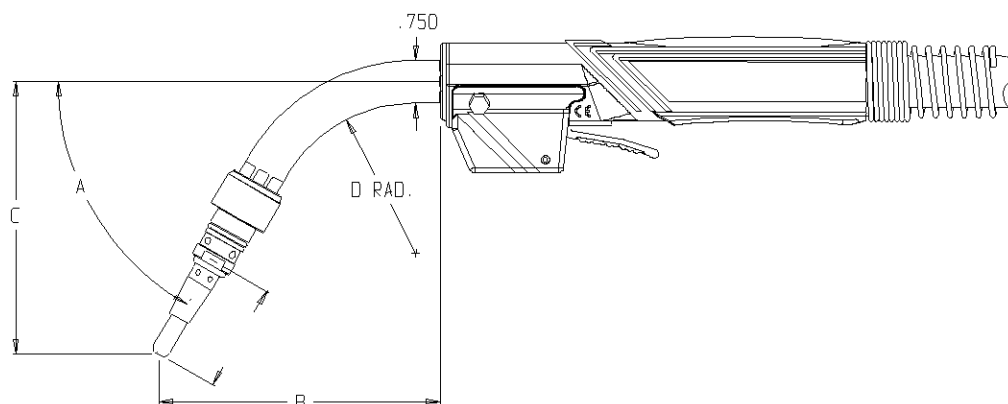
PART #			DESCRIPTION
350 AMP	450 AMP	550 AMP	
313-8	413-7	513-7	UNICABLE CLAMP KIT (COMPLETE)
INDIVIDUAL PARTS			
308	408	408	CONNECTOR CONE
409	409	509	CONE NUT
313-3	513-1	523-1	OUTER JACKET CLAMPS (2)
413-5	413-5	413-5	SUPPORT TUBE CLAMP
413-4	413-4	413-4	SUPPORT TUBE
412-1	412-1	412-1	SWITCH LEAD CONNECTORS (2)
412-3	412-3	412-3	CONTROL WIRE SHEATH

Repair Tool Kit

PART #	DESCRIPTION
450	REPAIR TOOL KIT (COMPLETE)
INDIVIDUAL TOOLS	
450-1	CABLE CUTTER
450-2	CLAMP PLIERS - FOR CRIMPING OF OUTER JACKET AND INNER TUBE CLAMPS
450-3	CONNECTOR CRIMPING TOOL - FOR SWITCH LEAD TERMINALS
450-4	5/16" NUT DRIVER - FOR REMOVAL OF SWITCH HOUSING
450-5	KNIFE - FOR TRIMMING OF OUTER JACKET
450-21	5 MM ALLEN KEY
450-13-2	SUPPORT TUBE INSTALLATION PIN – 350/450 AMP
450-13-3	SUPPORT TUBE INSTALLATION PIN – 550 AMP

4 Specifications

4.1 Gooseneck Dimensions



GOOSENECK	A	B		C		D		E	
		INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
305-60	60°	4.10	105	4.00	103	2.00	51	1.90	48
405-45	45°	5.19	132	3.55	90	3.00	76	1.90	48
405-60	60°	4.98	127	4.78	121	3.00	76	1.90	48
405-180	180°	7.35	187	---	---	---	---	1.90	48
505-45	45°	7.23	184	3.87	98	4.00	102	1.90	48
505-60	60°	6.04	153	5.30	135	4.00	102	1.90	48

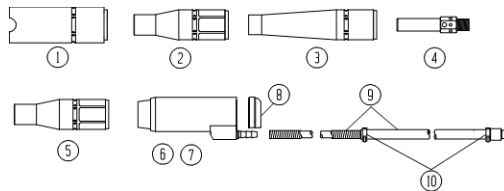
4.2 Gun Amperage Ratings

GUN MODEL	
60% DUTY CYCLE - MIXED GASES OR 100% DUTY CYCLE - CO2	
350 amp	350 amp
450 amp	450 amp
550 amp	550 amp

NOTE: Ratings are based on tests that comply with IEC 60974-7 standards.

5 Options and Accessories

5.1 Specialty and Optional Items - 350, 450, 550 amp Semi-Auto Air-Cooled



ITEM	PART #	DESCRIPTION
1	401-10-87	SPOT NOZZLE (BRASS)
2	401-21	FLUX CORE NOZZLE (GASLESS)
3	401-41-50	EXTENDED REACH NOZZLE - 3.5" (88.9 MM)
4	404-41	EXTENDED REACH GAS DIFFUSER
5	401-42-50	HIGH ACCESS NOZZLE (BOTTLE-NECKED)
6	401-26-62	WATER-COOLED NOZZLE - FIXED HOSE SYSTEM 5/8" (15.9 MM) FOR 5/16" (7.9 MM) TIP RECESS
7	401-26-75	WATER-COOLED NOZZLE - FIXED HOSE SYSTEM 3/4" (19 MM) FOR 5/16" (7.9 MM) TIP RECESS
8	402-26	GOOSENECK INSULATOR USED WITH 401-26-62 & 401-26-75
9	430-3	WATER HOSE ONLY - 15' (4.6 M)
10	656-1	HOSE CLAMP

5.2 Direct Power Pins

NOTE: Euro MIG guns will require unicable repair and a new rear handle assembly to use direct power pins.

PART #	DESCRIPTION	USE ON FEEDERS
214	TREGASKISS CONVENTIONAL POWER PIN	TREGASKISS QUICK CONNECT BLOCK, HOBART 2000 SERIES FEEDERS, TWECO #4 RECEPTACLE BODY PART #TAK-1
414-11-2	O-RING - FOR MILLER POWER PINS	MILLERMATIC 200 & 250, S21E & S22 SERIES, 52 & 54 SERIES, 60 SERIES
214-6-116	MILLER POWER PIN - FOR .035" - 1/16" WIRE	MILLERMATIC 200 & 250, S21E & S22 SERIES, 52 & 54 SERIES, 60 SERIES
214-6-332	MILLER POWER PIN - FOR 5/64" - 3/32" WIRE	MILLERMATIC 200 & 250, S21E & S22 SERIES, 52 & 54 SERIES, 60 SERIES
214-116	GUIDE CAP ONLY - FOR 214-6-116 (NEW STYLE)	
214-332	GUIDE CAP ONLY - FOR 214-6-332 (NEW STYLE)	
214-9	GUIDE CAP ONLY - FOR ALUMINUM LINER (NEW STYLE)	
414-116	GUIDE CAP ONLY - FOR 214-6-116 (OLD STYLE)	
414-332	GUIDE CAP ONLY - FOR 214-6-332 (OLD STYLE)	
414-9	GUIDE CAP ONLY - FOR ALUMINUM LINER (OLD STYLE)	
214-12	TWECO #5 STYLE POWER PIN	ALL FEEDERS SET UP WITH TWECO #5
414-12-2	O-RING - FOR TWECO® #5 STYLE	RECEPTACLE BODY PART #6TAK-1

	POWER PIN	
214-2	LINCOLN POWER PIN	LINCOLN LN7, 8 & 9, LN25 SUITCASE, LN22,NA2
414-21	ESAB (Non Euro)	A-10
214-13	PANASONIC	

5.3 Feeder Adaptors

To be used with 417 (Tweco #4), 417-50 (Euro) & 417-60 (Tweco #5) Quick Connect Block

PART #	USE ON FEEDERS
418-1	AIRCO
418-3	ESAB (NON EURO STYLE) AND HOBART BETA MIG
418-4	HOBART 27
418-5	LINCOLN LN4, LN5, LINDE SWM 31, 3A & 32A
418-6	LINCOLN LN7, 8 & 9, LN 25 SUITCASE, LN22
418-7	LINDE SWM-14
418-8	LINDE 35 SWM-23
418-9	MILLER 10A, 30A (MILLERMATIC 35S FEEDER)
418-10	MILLER 52E, 54E, S21, S22 SERIES AND MILLERMATIC 200 & 250, 60 SERIES
418-14	OTC
418-21	GILLILAND
418-27	PANASONIC
418-29	TWECO #5 PIN
418-35	KOBELCO

5.4 Control Plugs

PART #	DESCRIPTION
419-1	AIRCO
419-2	HOBART
419-4	MILLER (52E, 54E)
419-5	WESTINGHOUSE
419-6	LINCOLN (LN7, 8, 9) NA2
419-7	MILLER (10E, 30E) & LINDE (SWM-35)
419-8	DIPSTICK 160,200, HOBART HANDLER, LINCOLN SP-100
419-10	DUAL SCHEDULE MILLER
419-11	LINCOLN DUAL SCHEDULE
419-12	OXOMATIC

5.5 Dual Schedule Option

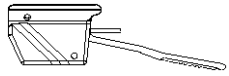
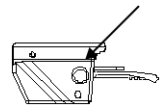
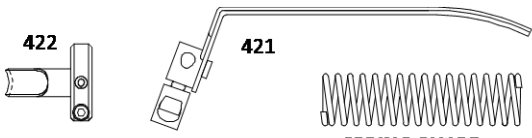
Two Position Switch Style

PART #	DESCRIPTION
411-11	DUAL SCHEDULE TWO-POSITION SWITCH HOUSING ONLY

Toggle Switch Style

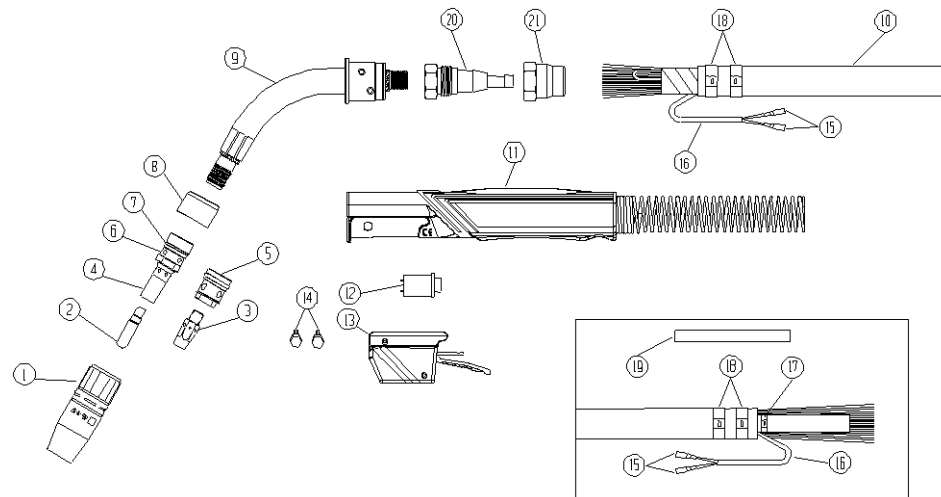
PART #	DESCRIPTION
411-12	DUAL SCHEDULE SWITCH HOUSING - COMPLETE W/TOGGLE SWITCH
411-13	DUAL SCHEDULE LOCK-ON TRIGGER HOUSING

5.6 Accessories

PART #	DESCRIPTION	
411-20	SWITCH HOUSING WITH EXTENDED LEVER	
411-4	SWITCH HOUSING WITH LOCK ON TRIGGER	
421	HEAT SHIELD	 422 421 SPRING GUARD 406-1 400 AMP 60 DEG 406-2 400 AMP 45 DEG 506-1 500AMP 60 DEG
421-1	SHIELD MOUNTING SCREW (NOT SHOWN)	
422	GUN HANGER	

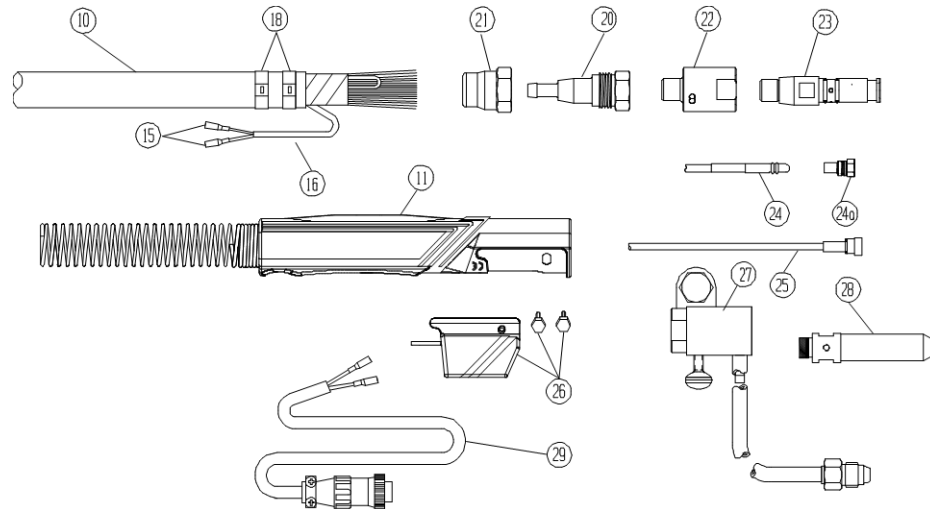
6 Exploded View & Parts List

6.1 Exploded View and Parts List - Front End - M001



DESCRIPTION	PART #		
	350 amp	450 amp	550 amp
1 NOZZLE			
2 TOUGH LOCK CONTACT TIP			
3 TOUGH LOCK HEAVY-DUTYGAS DIFFUSER			
4 TOUGH LOCK RETAINING HEAD			
5 NOZZLE RETAINER	402-3	402-3	402-3
6 RETAINING RING ONLY	454-1-2	454-1-2	454-1-2
7 O-RING ONLY	402-6	402-6	402-6
8 GOOSENECK INSULATOR	402-11	402-11	402-11
9 GOOSENECK			
10 UNICABLE ASSEMBLY (Includes handle/spring assembly)			
10' (3 m) SERVICE	313-10	413-10	513-10
12' (4 m) SERVICE	313-12	413-12	513-12
15' (5 m) SERVICE	313-15	413-15	513-15
20' (6 m) SERVICE	313-20	413-20	513-20
25' (8 m) SERVICE	313-25	413-25	513-25
11 HANDLE/SPRING GUARD ASSEMBLY-FRONT AND REAR	410	410	410
12 SWITCH ONLY	411-1	411-1	411-1
13 SWITCH OPTIONS			
14 MOUNTING SCREWS (Metric M5)	411-3M	411-3M	411-3M
UNICABLE REPAIR KIT (Includes parts 15-21)	313-8	413-7	513-7

6.2 Exploded View and Parts List - Back End - M001



DESCRIPTION	PART #		
	350 amp	450 amp	550 amp
22 POWER PIN BLOCK	414-400	414-400	414-400
23 POWER PIN			
24 QUICK LOAD LINER			
24A QUICK LOAD LINER RETAINER	415-26	415-26	415-26
25 CONVENTIONAL THREAD-IN LINER			
26 CONTROL HOUSING WITH SCREWS	416-5	416-5	416-5
27 FEEDER ADAPTOR (SOLD SEPARATELY)			
28 FEEDER ADAPTOR PIN (SOLD SEPARATELY)			
ACCESSORIES (NOT SHOWN)			
SPRING GUARD FOR 60 DEGREE NECK	NA	406-1	506-1
SPRING GUARD FOR 45 DEGREE NECK	NA	406-2	NA
GUN HANGER	NA	422	NA
HEAT SHIELD (SOLD WITH GUN HANGER	NA	421	NA
HEAT SHIELD MOUTING SCREWS	NA	421-1	NA

7 Ordering Information

7.1 Gun Standards Chart - M001

GUN MODEL	GOOSENECK	NOZZLE	RETAINING HEAD	GOOSENECK INSULATOR	CONTACT TIPS
350 amp	305-60	401-6-62	404-20	402-11	403-20-XX
450 amp	405-60	401-6-62	404-20	402-11	403-20-XX
550 amp	505-60	401-5-75	404-20	402-11	403-20-XX

7.2 Contact Tregaskiss



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